

**ABSTRACT OF THE DISCLOSURE**

An engine (10) has a hydraulic system (28) that serves both fuel injectors (22) and hydraulic actuators (40) of an engine brake that brakes the engine by controlling exhaust gas flow during engine braking. Pressure of the hydraulic fluid is set by an injection control strategy when a brake control pressure strategy is inactive. When the brake control pressure strategy is active, braking of the engine occurs when hydraulic fluid is delivered to the actuators. The brake control pressure strategy signals pressure of the hydraulic fluid supplied to the one or more actuators that is in excess of a pressure determined by a brake control pressure strategy. The brake control pressure strategy then limits pressure of the hydraulic fluid.